

PP81. Chemical composition and antimicrobial activity of *Glebionis coronaria* (L.) Cass. ex Spach essential oil

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Glebionis coronaria (L.) Cass. ex Spach (syn. *Chrysanthemum coronarium* L.) is a member of the Asteraceae plant family which has extensive edible, folk medicinal, insecticidal uses. Previously, an essential oil of flowerheads of *C. coronarium* from Spain was reported to contain camphor (29.2%), α -pinene (14.8%), β -pinene (9.5%), and lylatyl acetate (9.8%). The oil was shown to possess significant antifungal activity [1]. Also, the essential-oil composition and antimicrobial properties of *C. coronarium* from Ukraine were investigated. The major constituents were found to be chrysanthemyl acetate (24.4%), chrysanthemol (21.8%), chrysanthenyl acetate (7.6%), camphor (7.3%), β -farnesene (5.9%), and α -bisabolol (5.6%). An ethanolic extract of the plant showed antimicrobial activity against Gram-positive (*S. aureus*) bacteria. [2]. Biological activities of the essential oil of *C. coronarium* from Jordan were also reported. The essential oil showed a significant antimicrobial activity against Gram-positive bacteria. Also, the oil showed moderate antioxidant activity, weak acetylcholinesterase-inhibitory and potent antiproliferative activities [3]. In the current study, the essential oil of the aerial parts of *G. coronaria* was obtained by hydrodistillation (3 h). The essential-oil composition was analyzed by means of gas chromatography-mass spectrometry (GC-MS). The main components of the essential oil from the aerial parts were capillene (54.5%) and caryophyllene oxide (9.8%). The current composition differed from the previously reported ones. Thus, *G. coronaria* originating from Istanbul belongs to a new chemotype of this species. Additionally, the antimicrobial activity of the oil was investigated against Gram-negative (*Escherichia coli* DH5 α) and Gram-positive (*Staphylococcus aureus*) bacteria. The essential oil showed a growth-inhibitory activity against *E. coli* (53.3%) and *S. aureus* (17.1%), tested at 75 mg/mL. The antimicrobial effects of the essential oil were more pronounced against Gram-negative bacteria.

References:

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